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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,955	05/23/2007	Daniel Marcel Thiebaut	ACE-16/US	2929

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EXAMINER	
PUTTLITZ, KARL J	

ART UNIT	PAPER NUMBER
1621	

NOTIFICATION DATE	DELIVERY MODE
03/20/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/596,955	THIEBAUT, DANIEL MARCEL	
	Examiner	Art Unit	
	KARL J. PUTTLITZ	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *4-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 4-25 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependant claim. See MPEP § 608.01(n). Accordingly, the claims 4-25 have not been further treated on the merits.

Claims 1-3 are objected to because of the following informalities: the bracketing before the claim with the claim number should be corrected. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The designation SN in claim 2 is unclear.

It is unclear as to which separation step claim 3 refers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,781,014 to Vidalin et al. (Vidalin) in view of U.S. Patent No. 6,846,951 to Thiebaut (Thiebaut), or U.S. Patent No. 7,199,276 to Sher et al. (Sher), or U.S. Publication Nos. 2004/0127759, based on an application by Van Egmond (Van Egmond) or 20050113623, based on an application by Kuechler et al. (Kuechler).

The rejected claims cover, inter alia, a method for manufacturing methanol and acetic acid, characterized by the integrated steps of:

separating a hydrocarbon source into first and second hydrocarbon streams;

steam reforming the first hydrocarbon stream with steam to produce a reformed stream;

autothermal reforming of a mixture of the reformed stream and the second hydrocarbon stream with oxygen and carbon dioxide to produce a syngas stream;separating a minor portion of the syngas stream into a carbon dioxide-rich stream, a hydrogen-rich stream, and a carbon monoxide-rich stream;

recycling the carbon dioxide-rich stream to the autothermal reforming;

compressing a remaining portion of the syngas stream, at least a portion of the hydrogen-rich stream to supply a makeup stream to a methanol synthesis loop to obtain a methanol product; and

synthesizing acetic acid from at least a portion of the methanol product and the carbon monoxide-rich stream.

In view of the above ambodiments, Vidalin teaches a methanol/acetic acid process with regard to the following figure:

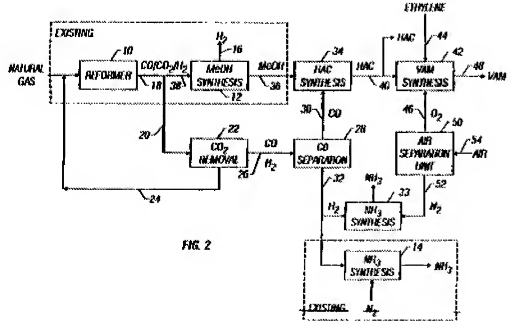

FIG. 2

see figure 2 wherein a reformer (10) to which natural gas or another hydrocarbon and steam (water) are fed. Syngas is formed in the reformer (10). All or part of the syngas is process to separate out carbon dioxide (24), carbon monoxide (30) and hydrogen (32), and the separated carbon dioxide (24) is the existing to the existing methanol synthesis

loop (12) for methanol synthesis, or back into the feed to the reformer (10) to enhance carbon monoxide formation in the syngas (18). Any remaining syngas (38) not fed to the carbon dioxide separator (22) can be converted to methanol in the existing methanol synthesis loop (12) along with carbon dioxide (24) from the separator (22) and/or imported carbon dioxide (25), and hydrogen (35) from the separator (28). The separated carbon monoxide (30) is then reacted with the methanol (36) to produce acetic acid (40) or an acetic acid precursor by a conventional process. Also disclosed is the reaction of separated hydrogen (32) with nitrogen (52), in a conventional manner, to produce ammonia. Also disclosed is the reaction of a portion of the acetic acid (40) in a conventional manner with oxygen (46) and ethylene (44) to form vinyl acetate monomer (48). The nitrogen for the added ammonia capacity in a retrofit of an original methanol plant comprising an ammonia synthesis loop (33), and the oxygen (46) for the vinyl acetate monomer process (42), are obtained from a mew air separation unit (50), see abstract.

While Vidalin fails to explicitly teach a combination of steam reforming and autothermal reforming, Thiebaut also teaches aan integrated process for the preparation of methanol and acetic acid via a syngas. In particular, Thiebault teaches that it is also known to run a combination of separate steam reforming and autothermal reforming operations for syngas production in order to provide syngas with a more suitable stoichiometric ratio for methanol production, see column 2, lines 18+ ("[the prior art teaches that] a process suitable for methanol production on a very large scale where the synthesis gas can be made as close as necessary to the stoichiometric composition

required for methanol production, by using the combination of both a primary steam reformer and an autothermal reactor").

The other applied references also demonstrate that the combination of both a primary steam reformer and an autothermal reactor is commonplace in the art, see column 5, lines 49+ of Sher, or paragraph 0003 of Kuechler or paragraph 0023 of Van Egmond.

In view of the above, the prior art contained the integrated process for producing methanol and acetic acid. The prior art contained a combination of both a primary steam reformer and an autothermal reactor applicable to the claimed process. Moreover, one of ordinary skill in the art would have recognized that applying the primary steam reformer and an autothermal reactor to a process for producing methanol and acetic acid would have yielded predictable results. In this connection, in applying a known technique of using a primary steam reformer and an autothermal reactor in a methanol/acetic acid process to yield predictable results, the claim would have been obvious because the known technique was recognized as part of the ordinary capabilities of one skilled in the art.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over

Claims 1-29 of Thiebaut

Claims 1-16 of Vidalin

Although the conflicting claims are not identical, they are not patentably distinct from each other because the conflicting claims recite a process of producing methanol and acetic acid, with the required separation and recycling steps, that the instant claims would have been prima facie obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached at telephone number (571) 272-0871. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karl J. Puttlitz/

Primary Examiner, Art Unit 1621